





## JEFFERSON COUNTY DEPARTMENT OF HEALTH

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**Environmental Health Services**  
Jonathan Stanton, P.E., Director

July 15, 2020

**Certified Mail**  
**Return Receipt Requested**

**Notice of Violation Letter, NOV # 3203**

Mr. Tiger Lambert & Mr. Freddie Revis  
General Managers  
Mr. Don Wiggins  
Environmental/Safety Coordinator  
Bluestone Coke  
3500 35<sup>th</sup> Avenue North  
Birmingham, Alabama 35207

Dear Sirs,

Bluestone Coke LLC (Bluestone) holds Title V Operating Permit 4-07-0355-03, issued by the Department in accordance with Chapter 18 of the Jefferson County Board of Health Air Pollution Control Rules and Regulations (Rules & Regulations or "Local Regulations"). Bluestone's Title V permit includes applicable requirements for sources of air emissions, including but not limited to Coke Batteries 3, 4 and 5. The applicable requirements addressed by this Notice of Violation include provisions of Part 6.9 of the Rules and Regulations, and the Maximum Available Control Technology (MACT) standards 40 CFR 63, Subpart L and Subpart CCCCC, which are incorporated by reference in Chapter 14 of the Rules & Regulations. EPA has delegated to the Department enforcement of MACT standards which have been incorporated in Chapter 14 by reference. The permit requirements pertinent to this notice of violation are cited within this letter and are presented with selected regulatory text in an attachment for the convenience of the reader, including explanatory notes for the layperson.

The permit requires daily inspections to determine compliance with the MACT standards. Daily visual observations of the battery are performed by a contractor, Direct Environmental Services, LLC (DES). The permit also requires reporting of emissions and compliance status consistent with the MACT and the Rules and Regulations.

The Department has reviewed the daily inspection reports from July of 2019 to present, and has found numerous exceedances of Part 6.9 and MACT emissions limitations. Bluestone has not

provided records related to uncontrolled pushing emissions in a timely manner as required by the permit and the Rules & Regulations, These violations will be described in detail below.

**1. OPERATION AND MAINTENANCE OF CAPTURE AND CONTROL SYSTEM FOR PUSHING EMISSIONS**

This section describes noncompliance with Title V Permit 4-07-0355-03, EU 021, pertaining to the operation and maintenance of equipment to capture and control emissions from coke pushing operations:

- Condition 13, Good Engineering Practice & Minimize Emissions to the Level of Subpart CCCCC (incorporating §63.7300(a) and §63.7300(b)(1)-(5)), and
- Condition 4, Subpart CCCCC (identifies facility as subject to 40 CFR 63, Subpart CCCCC and serves as a catch-all for applicable requirements that are not directly referenced and/or reprinted in full in the permit)

Pushing emissions at Bluestone are captured by a belt-driven moveable hood which travels on an overhead rail in conjunction with a moveable intake in the ductwork. A stationary baghouse then collects the pushing emissions. The capture system is subject to an operating limit under §63.7290(b)(3). The captured emissions are directed to a baghouse which is subject to an emissions limitation under §63.7290(a)(2). Based on malfunction reports and emissions estimates submitted by Bluestone, Bluestone began experiencing persistent problems with the collection system in late 2019 which have caused ovens to be pushed uncontrolled while the hood has been down for repairs. Bluestone is required to operate the capture system, including the hood, and the baghouse to meet the emissions limits of Subpart CCCCC at all times by §63.7300(a).

Almost 6 months into 2020, it appears that capture system repairs are still not completed. The daily pushing reports indicate that the hood was not used on any push read for MACT compliance from April 14, 2020 to June 16, 2020. During the Department's most recent inspection on June 22, 2020, it was observed that the hood still cannot be used for certain ovens until additional repairs are made.

Under §63.7300(c)(1), Bluestone must complete repairs within 30 days or submit a request for extension including a plan to complete the repairs to the Department if additional time is needed. Bluestone has not requested an extension and has not provided a plan to restore the capture and control system to full operation. Even if Bluestone can demonstrate that no individual repair has required more than 30 days to complete, these repairs have taken the pushing controls out of service for at least one oven each day for the entire year 2020 to date except for 20 days, as indicated by the daily pushing observations. The Department believes that the cause of the downtime is inadequate maintenance over a substantial time period and that these problems cannot be called "malfunctions" consistent with the definition at §63.2. Bluestone is not meeting the general duty to minimize emissions from pushing as required by Subpart CCCCC.

Compliance with the capture system operating limit and the baghouse emission limit cannot be demonstrated while the hood and associated ductwork are nonfunctional.

## **2. OPERATION AND MAINTENANCE OF COKE OVEN BATTERIES**

This section describes noncompliance with Title V Permit 4-07-0355-03, EU 021, pertaining to visible emissions from coke pushing operations:

- Condition 1, Applicability – Visible Emissions Restriction (incorporating 6.9.4 and Title V monitoring under Chapter 18)
- Condition 13, Good Engineering Practice & Minimize Emissions to the Level of Subpart CCCCC (incorporating §63.7300(a) and §63.7300(b)(1)-(5))
- Condition 14, Subpart CCCCC – Continuous Compliance with the Operation and Maintenance Requirements (incorporating §63.7335)

The contractor's daily pushing observations and corrective action records kept in conjunction with Subpart CCCCC do indicate that Bluestone is generally following the MACT requirements for identification of ovens with excessive pushing emissions and documenting causes and corrective actions. These requirements are included in section 2 of Attachment 2 for reference. (See Table 1 of Attachment 3 for a list of ovens subject to MACT corrective actions and the dates of any deviations.) However, examination of these daily records of pushes observed by DES indicate that Bluestone does not take sufficient action to prevent exceedances of Section 6.9.4 of the Rules and Regulations. Review of the daily records located 42 instances in which 15-second readings of greater than 40% from more than one oven on the same battery within a 60-minute period are recorded during daily Subpart CCCCC inspections have occurred since July 1, 2019. (See Table 2 of Attachment 3 for description.) . The most egregious example of this occurred on May 20, 2020, when ovens 202, 235 and 232 were identified for MACT corrective actions within the 10 am hour, with MACT averaged emissions of 78%, 93% and 90%, respectively.

Consecutive daily readings of the same oven show peak opacity readings greater than 40% for 3 days or more, yet these ovens remained in operation. Problems creating excess opacity are addressed when MACT corrective actions are triggered, but a single peak reading greater than 40% is not likely to trigger MACT corrective actions when averaged with (up to) 5 other 15-second interval readings. These violations of Section 6.9.4 of the Rules and Regulations are an indicator that Bluestone is not meeting the requirements of Section 6.9.7 to maintain ovens in good condition to promote complete coking.

Additionally, under Subpart CCCCC, Bluestone is required to prepare and operate at all times according to a written operation and maintenance plan for the operation and maintenance of the coke oven batteries and their capture systems and control devices (see §63.7300(b) and (c)). The Department notes that Bluestone's work practice plan sets a threshold of 23% opacity for MACT corrective actions, which is lower than the actual MACT threshold, which is 30% opacity. (See page 22 of Bluestone's work practice plan, revised September 2019.) There is no indication in

the reports reviewed by the Department that Bluestone actually uses the lower threshold for corrective actions. Therefore Bluestone is not operating in accordance with its written operation and maintenance plan in violation of §63.7300.

### **3. DOORS, OFFTAKES and CHARGING OPERATIONS**

This section describes noncompliance with Title V Permit 4-07-0355-03, EU 009, 012 and 015, pertaining to leaking doors and offtakes, and to visible emissions from charging operations:

- Condition 5, Percent Leaking Doors Restriction (citing Subpart L and 6.9.6)
- Condition 7, Percent Leaking Offtake System Restriction (citing Subpart L and 6.9.5)
- Condition 8, Charging Visible Emissions Time Restriction (citing Subpart L)
- Condition 9, Charging Visible Emissions Opacity Restriction (citing 6.9.3)

Subpart L requires daily inspections to tally leaks from doors, offtakes and lids, and daily observations of charges using EPA Method 303. Bluestone is required by 40 CFR §63.306 to maintain a Work Practice Plan for these emission points, and to “implement” the work practice plan if certain triggers are met.

Work practice plan implementation is required to address frequent exceedances of Subpart L limits over any 6 month period. The plain English explanation of “independent” exceedances: First, 2 or more exceedances of the 30-day (regular or logarithmic) average occurring 30 days or more apart (within a 6 month period) are “independent” and implementation has been triggered. Second, implementation may also be triggered as early as the second exceedance if the exclusion of the highest single day inspection results within the 30-day period produces a 29-day (regular or logarithmic) average that also exceeds the applicable emission limit. This second circumstance is also termed “independent.”

Work practice plan implementation must continue until the visible emission limitation for the emission point has been achieved for 90 consecutive days pursuant to 40 CFR §63.306(c)(1)(ii). Bluestone has numerous exceedances of the applicable limits for doors, offtakes and charges, as enumerated in Tables 3, 4 and 5 of Attachment 3. A status summary is presented below.

Doors are subject to a 3.3% limit on leaks as a 30-day average. Currently, Bluestone is required to implement the work practice plan for doors on all 3 batteries. The status of compliance as of July 11, 2020 is:

- Battery 3 doors have exceeded the applicable limit for 144 consecutive days, for a total of 163 days in 2020 (to date).
- Battery 4 doors have exceeded the applicable limit for 78 consecutive days, for a total of 84 days in 2020 (to date).
- Battery 5 doors have exceeded the applicable limit for 80 consecutive days, for a total of 91 days in 2020 (to date).

Offtakes are subject to a 2.5% limit on leaks as a 30-day average. Currently, Bluestone is required to implement the work practice plan for offtakes on batteries 3 and 5. The status of compliance as of July 11, 2020 is:

- Battery 3 offtakes have exceeded the applicable limit for 71 consecutive days, for a total of 83 days in 2020 (to date).
- Battery 4 offtakes have exceeded the applicable limit for 26 consecutive days, for a total of 54 days in 2020 (to date).
- Battery 5 offtakes exceeded the applicable limit for a total of 29 days in 2020 (to date).

Charging emissions are subject to a 12 limit on visible emissions as a 30-day log average. Batteries 3 and 4 are treated as one battery for the observation of charging emissions. Currently, Bluestone is required to implement the work practice plan for charging on all 3 batteries. The status of compliance as of July 11, 2020 is:

- Batteries 3 and 4 charges have exceeded the applicable limit for 45 consecutive days, for a total of 125 days in 2020 (to date).
- Battery 5 charges have exceeded the applicable limit for 38 consecutive days, for a total of 50 days in 2020 (to date).

These emission points are also subject to emissions limitations under the Rules and Regulations. The local limits are based on a single pass observation. Under normal circumstances, the Department inspects Bluestone once a month for compliance with the applicable local requirements for doors, offtakes, lids and charges. The Department noted a violation of the local limitation on charging emissions (3 minutes in any consecutive 60 minutes on any battery per Paragraph 6.9.3 of the Rules and Regulations) on February 20, 2020. On that date, a single charge of oven 180 exceeded 3 minutes. On June 20, 2020, the percentage of leaking doors on Battery 4 exceeded 15% during a single run. Daily Method 303 readings performed by the contractor also show occasional exceedances of the local limits.

Even though Bluestone is required to implement the work practice plan for emissions points enumerated above, the duration of the exceedances indicate current measures are insufficient to correct these violations. The Department may require Bluestone to revise the work practice plan in accordance with §63.306(d) for charging emissions, offtakes, and doors.

At this time, the Department requires that Bluestone examine the causes of these persistent exceedances of Subpart L, including but not limited to such causes as deficiencies in the work practice plan, failure to adhere to the plan, and inadequate maintenance. A report of the findings shall be submitted no later than July 31, 2020.

#### **4. REQUIREMENTS FOR SPARE DOORS AND LIDS**

This section describes noncompliance with Title V Permit 4-07-0355-03, EU 009, 012 and 015, pertaining maintaining an inventory of spare doors and lids:

- Condition 12, Work Practice Standards (citing §63.306(a), §63.307 and §63.309(h))
- Condition 16, Oven Maintenance (citing 6.9.7)
- Condition 17, Coke Oven Standards (incorporating 6.9.6)

Subparagraph 6.9.6(d) of the Rules and Regulations states: “Every person operating coke ovens shall have a facility to maintain and repair coke oven doors, and shall maintain an inventory of one (1) coke oven door per twelve (12) ovens operated.” On January 7, 2020, the Department inspected the Bluestone door shop for compliance with this requirement. On that day, 76 ovens were in service, requiring 7 spare doors under the Rules and Regulations. Bluestone only had 2 spare doors ready to be used.

Bluestone’s Work Practice Plan includes a procedure to maintain an adequate inventory of spare door and jambs as required by Subpart L. On pages 11 as 12, it states that 10% coke side doors and jambs, 10% pusher side USS doors and jambs, and 10% pusher side Koppers doors and jambs, as well as 2 crates of spare lids, shall be kept onsite on an on-going basis. The quantity of spare doors observed on January 2, 2020 does not meet Bluestone’s work practice plan. Additionally, no spare jambs and no spare lids were observed on that date.

Under §63.311(f)(4), Bluestone is required to examine and record the inventory of spare doors and jambs within 10 days of being required to implement the work practice plan for doors. Bluestone has been aware that numerous doors and jambs need replacement and has been ordering replacements because the quantity in inventory has not been sufficient to complete all needed door repairs. Continuing exceedances of limits for leaking doors strongly suggest that the inventory of spare doors and jambs is not in compliance with the applicable requirements at this time.

## **5. REPORTING REQUIREMENTS**

This section describes noncompliance with Title V Permit 4-07-0355-03, General Conditions, pertaining to reporting of events in which emissions in excess of the applicable regulatory limits are released to the atmosphere:

- General Condition 6, Maintenance of Equipment: Reporting (citing 1.12.1, 18.2.4 and 18.2.8(a))
- General Condition 7, Malfunction: Reporting (citing 1.12.2, 18.2.4 and 18.2.8(a))
- General Condition 17, Deviations (citing 18.5.3(c)(2) and 40 CFR 63)

In 2019 and January of 2020, Bluestone was timely in reporting breakdowns, repairs and the number of ovens pushed without controls. However, as one repair led to the identification of additional needed repairs, Bluestone has been delinquent in reporting of maintenance and uncontrolled pushes. The Department is aware that repairs of defects which prevent operation of the capture and control system is on-going, although specific descriptions are not being provided on an on-going basis. Bluestone also has failed to submit to the Department reports of the number of uncontrolled pushes since at least February 12, 2020.

**Concluding Remarks**

This notice of violation does not cover all emission points at your facility. The Department reserves the right to issue additional notices of violation based on any violation discovered after this time for any emissions point as well as for previous violations not identified herein and not covered by a prior enforcement action.

Sincerely,



Jason Howanitz, M.S., P.E.  
Senior Air Pollution Control Engineer  
Air & Radiation Protection Division

JH/kp

## ATTACHMENT 1

### *Process Explanation for the Layperson*

*At Bluestone, each battery consists of 30 or 60 adjacent vertical slot ovens. Combustion gases pass through the walls between ovens to heat them. Each oven has a total of 6 openings ("ports") on the top of the battery. On one end, the "pusher side," the opening is equipped with an "offtake" which directs gases from the oven into the collecting main. The remaining openings are covered by lids when they are not open for operational purposes. The four middle ports are used to place coal into the ovens. The port on the end opposite the offtake is used to direct gases from an oven into the adjacent oven while the oven is being charged. Coal is placed into the ovens from the top of the battery (see the charging description below). The coal is then heated ("coked") for 18 or more hours until the volatile material has been driven out of the coal. The volatile materials (raw coke oven gas) flow above the coal into an "offtake" which leads to the collecting main, which carries the gases to the byproducts plant for cleaning and separation.*

*After coking, the remaining solid material ("coke") is pushed from the oven using a moveable "pusher" with a ram that is extended through the oven, pushing the coke into a "hot car" positioned on the "coke side" of the battery. The hot car is a specialized rail car that transports the hot coke to the quench tower then to an area called the "wharf" for further cooling and transportation to the coke screening equipment. Pushing emissions produced at the end of the oven as hot coke is pushed are captured by a moveable hood connected to a stationary baghouse. The associated ductwork uses a belt on rollers to move the hood and the opening from the hood into the duct to the required location to capture pushing emissions. It usually takes less than a minute to push the coke from an oven. The opacity and duration of particulate matter emissions from the hot coke after it has been pushed out of the oven and before it has been quenched varies with each push.*

*Charging means the addition of coal to a coke oven. Coal is loaded from the centrally located tower into open bins that are part of a moveable "larry car" which then travels across the battery to the oven to be charged. There is one bin for each charging hole ("port") on an oven. A "drop sleeve" is extended from beneath each bin into each charging hole to direct the coal into the oven with minimal spillage. An extra port on the end of each oven opposite the offtakes is used, in conjunction with a relocatable "jumper" pipe, to direct gases displaced and generated by the addition of coal into an adjacent oven, where the gases then flow into the collecting main which extends across the battery. Visible charging emissions occur when the gas escapes from the charging ports or the larry car. At Bluestone, it typically takes about 3 to 5 minutes to empty the coal into an oven and to level the coal inside the battery using a "leveling arm" which is operated by the pusher car through an opening on the battery door, called a "chuck door." Bluestone can charge up to 6 ovens in an hour, based on equipment constraints.*

*The process is not subject to startups or shutdowns in the normal course of operations.*

*There are 2 main sources of regulation for battery operations. The JCBH Air Pollution Control Rules and Regulations ("local regulations" or "Rules & Regulations" for coke oven batteries are located in Part 6.9. Federal regulations, called Maximum Available Control Technology ("MACT") standards, for coke battery operations include 40 CFR 63, Subpart L, §§ 63.300 through 63.313 and 40 CFR 63, Subpart CCCCC, §§ 63.7280 through 63.7352. These regulations are included in Bluestone's Title V Operating Permit Number 4-07-0355-03, issued by the Department in accordance with Chapter 18 of the Rules and Regulations.*

**ATTACHMENT 2**  
**PERTINENT PERMIT CONDITIONS AND REGULATIONS**

*With Explanatory Text for the Layperson*

**1. OPERATION AND MAINTENANCE OF CAPTURE AND CONTROL SYSTEM FOR PUSHING EMISSIONS**

*Pushing emissions are those particulate matter emissions which result from the action of pushing coke from the oven into the hot car and also from the hot coke until it is quenched. Subpart CCCCC requires these emissions to be captured and controlled at all times. At Bluestone, a moveable hood is used to capture pushing emissions, which are transported to a stationary baghouse which collects the particulate matter. Numerous factors contribute to the proper positioning and operation of the hood. Maintenance and repairs are inevitable, however, uncontrolled pushes can be minimized by pausing pushing operations when the capture system is down. Subpart CCCCC requires repairs to be accomplished within 30 days of discovering a deficiency or defect. Title V Permit No. 4-07-0355-03 includes these requirements, presented below, at Emissions Unit 021.*

**Title V Permit 4-07-0355-03**

**EU 021, Condition 13, Good Engineering Practice & Minimize Emissions to the Level of Subpart CCCCC**  
(incorporating §63.7300(a) and §63.7300(b)(1)-(5))

**§63.7300(a)** "As required by §63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart."

*This requirement is commonly included in MACT standards and is often referred to as a "general duty clause." Bluestone is hereby required to use the capture and control systems at all times to minimize emissions in compliance with the requirements of Conditions 5 and 6, presented below. §63.7300(b) is discussed in section 2.*

**EU 021, Condition 4, Subpart CCCCC** (identifies facility as subject to 40 CFR 63, Subpart CCCCC and serves as a catch-all for applicable requirements that are not directly referenced and/or reprinted in full in the permit)

**§63.7300(c)(1)** "... In the event a defect or deficiency is found in the capture system (during a monthly inspection or between inspections), **you must complete repairs within 30 days after the date that the defect or deficiency is discovered.** If you determine that the repairs cannot be completed within 30 days, you must submit a written request for an extension of time to complete the repairs that must be received by the permitting authority not more than 20 days after the date that the defect or deficiency is discovered. The request must contain a description of the defect or deficiency, the steps needed and taken to correct the problem, the interim steps being taken to mitigate the emissions impact of the defect or deficiency, and a proposed schedule for completing the repairs. The request shall be deemed approved unless and until such time as the permitting authority notifies you that it objects to the request. The permitting authority may consider all relevant factors in deciding whether to approve or deny the request (including feasibility and safety). Each approved schedule must provide for completion of repairs as expeditiously as practicable, and the permitting authority may request modifications to the proposed schedule as part of the approval process." *(emphasis added)*

*This is the proper procedure for when repairs of the capture system cannot be accomplished within 30 days.*

**§63.2** "Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or

usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. **Failures that are caused in part by poor maintenance or careless operation are not malfunctions.**" (emphasis added)

*Self-explanatory.*

**EU 021, Condition 5, Subpart CCCCC – Emissions Limitation – PM** (incorporating §63.7290(a)(2))

**§63.7290(a)(2)** "You must not discharge to the atmosphere emissions of particulate matter from a control device applied to pushing emissions from a new or existing coke oven battery that exceed ... 0.02 pound per ton (lb/ton) of coke if a moveable hood vented to a stationary control device is used to capture emissions ..."

*Pushing emissions are captured by the hood and transported to the baghouse through ductwork. Subpart CCCCC also includes requirements for other acceptable control devices, with individual emission limits not repeated here. Compliance is determined by periodic performance testing. However, operation and performance testing of the baghouse is meaningless when pushing emissions are not being captured.*

**EU 021, Condition 6, Subpart CCCCC – Operating Limit** (incorporating §63.7290(b)(3))

**§63.7290(b)(3)** "For each capture system applied to pushing emissions, you must maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test; or (i) For each capture system that uses an electric motor to drive the fan, you must maintain the daily average fan motor amperes at or above the minimum level established during the initial performance test..."

*Bluestone established an operating limit for the capture system during performance testing. However, this operating limit is meaningless when the hood is not used to capture emissions.*

**2. OPERATION AND MAINTENANCE OF COKE OVEN BATTERIES**

*Pushing emissions are those visible particulate matter emissions which result from the action of pushing coke from the oven and also from the hot coke until it is quenched. Excessive opacity of pushing emissions is an indication of incomplete coking, which may be caused by inadequate coking time or by defects in the oven. Batteries 3 and 4 are treated as one battery for the purposes of observing pushing emissions. All batteries at Bluestone consist of "short" ovens with vertical flues. Title V Permit No. 4-07-0355-03 includes these requirements at Emissions Unit 021.*

**Title V Permit 4-07-0355-03**

**EU 021, Condition 1, Applicability – Visible Emissions Restriction** (incorporating 6.9.4 and Title V monitoring under Chapter 18)

**6.9.4 Pushing.** "There shall be no visible emissions during the pushing cycle, other than water mist or vapor, with an opacity which is greater than forty percent (40%) for more than one (1) push per hour per battery or for more than two (2) consecutive pushes from the same oven."

*These limits on pushing emissions address hourly emissions and indications of corrective actions. Pushes are read continuously, assigning opacity consistent with EPA Method 9 (40 CFR 60, Appendix A), but only the peak opacity is recorded. Generally, peak emissions over 40% indicate incomplete coking, which may be attributed to inadequate coking time and/or oven defects. The cause(s) should be addressed and corrected promptly, or the*

*oven may be taken out of service for repairs. Repeated pushes with peak opacity greater than 40% from the same oven indicate that the cause of excessive pushing emissions has not been promptly corrected.*

**JCBH Air Pollution Control Rules and Regulations, 6.9.7 Oven Maintenance**

**6.9.7(a)** All ovens shall be maintained in good condition to promote complete coking of coal.

**6.9.7(b)** All coke oven cracks are to be sealed as soon as practicable after they are detected.

*Self-explanatory. The Department will point out that taking an oven out of service until repairs are made is not a violation of this provision. However, repeated pushes of the same oven when the opacity exceeds 40% strongly suggests that the oven is not being maintained in good condition and/or is not being promptly repaired.*

*Paragraph 6.9.7 is included in EU 009, 012, and 015 for battery operations, but it also applicable to pushing emissions.*

**EU 021, Condition 7, Subpart CCCCC – Work Practice Standards** (incorporating §63.7291(a)(1)-(4) and incorporating §63.7334 (a) by reference)

**EU 021, Condition 8, Subpart CCCCC – Fugitive Pushing Emissions: Corrective Actions/Increase Coking Time** (incorporating §63.7291(a)(5) and summarizing §63.7291(a)(6)(i)-(ii) and (7)(i)-(iii))

*To summarize the requirements for observing visible pushing emissions on a daily basis: At least 4 pushes must be read each day. Each oven must be read at least once per quarter. Pushes are read at 15 second intervals, assigning opacity consistent with EPA Method 9 (40 CFR 60, Appendix A), but only the 6 highest readings are used to calculate the average opacity. Corrective actions are required when the calculated average opacity of a push exceeds 30%, and must be confirmed by 2 consecutive follow-up readings which do not exceed 30%. Coking time may be increased and/or defects in the oven may be repaired (with or without taking the oven out of service). A procedure is included in Subpart CCCCC to demonstrate that coking time may be reduced subsequent to corrective actions. The text reproduced below includes only the requirements that apply to Bluestone's actual equipment.*

**§63.7291(a)** You must meet each requirement in paragraphs (a)(1) through (7) of this section for each new or existing by-product coke oven battery with vertical flues.

**(1)** Observe and record the opacity of fugitive pushing emissions from each oven at least once every 90 days. If an oven cannot be observed during a 90-day period due to circumstances that were not reasonably avoidable, you must observe the opacity of the first push of that oven following the close of the 90-day period that is capable of being observed in accordance with the procedures in §63.7334(a), and you must document why the oven was not observed within a 90-day period. All opacity observations of fugitive pushing emissions for batteries with vertical flues must be made using the procedures in §63.7334(a).

**(2)** If two or more batteries are served by the same pushing equipment and total no more than 90 ovens, the batteries as a unit can be considered a single battery.

**(3)** Observe and record the opacity of fugitive pushing emissions for at least four consecutive pushes per battery each day. Exclude any push during which the observer's view is obstructed or obscured by interferences and observe the next available push to complete the set of four pushes. If necessary due to circumstances that were not reasonably avoidable, you may observe fewer than four consecutive pushes in a day; however, you must observe and record as many consecutive pushes as possible and document why four consecutive pushes could not be

observed. You may observe and record one or more non-consecutive pushes in addition to any consecutive pushes observed in a day.

**(4)** Do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day. Keep records indicating the legitimate operational reason for any change in your pushing schedule which results in a change in the sequence of consecutive pushes observed on any day.

**(5)** If the average opacity for any individual push exceeds 30 percent opacity for any short battery ..., you must take corrective action and/or increase coking time for that oven. You must complete corrective action or increase coking time within either 10 calendar days or the number of days determined using Equation 1 of this section, whichever is greater:

$$X = 0.55 * Y \quad (\text{Eq. 1})$$

Where:

X = Number of calendar days allowed to complete corrective action or increase coking time; and

Y = Current coking time for the oven, hours.

For the purpose of determining the number of calendar days allowed under Equation 1 of this section, day one is the first day following the day you observed an opacity in excess of 30 percent for any short battery .... Any fraction produced by Equation 1 of this section must be counted as a whole day. Days during which the oven is removed from service are not included in the number of days allowed to complete corrective action.

**(6)** **(i)** You must demonstrate that the corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this section, observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in §63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery .... If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery ..., the corrective action and/or increased coking time was unsuccessful, and you must complete additional corrective action and/or increase coking time for that oven within the number of days allowed in paragraph (a)(5) of this section.

**(ii)** After implementing any additional corrective action and/or increased coking time required under paragraph (a)(6)(i) or (a)(7)(ii) of this section, you must demonstrate that corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this section, you must observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in §63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery .... If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30

percent for a short battery ..., the corrective action and/or increased coking time was unsuccessful, and you must follow the procedures in paragraph (a)(6)(iii) of this section.

(iii) If the corrective action and/or increased coking time was unsuccessful as described in paragraph (a)(6)(ii) of this section, you must repeat the procedures in paragraph (a)(6)(ii) of this section until the corrective action and/or increased coking time is successful. You must report to the permitting authority as a deviation each unsuccessful attempt at corrective action and/or increased coking time under paragraph (a)(6)(ii) of this section.

(7) (i) If at any time you place an oven on increased coking time as a result of fugitive pushing emissions that exceed 30 percent for a short battery ..., you must keep the oven on the increased coking time until the oven qualifies for decreased coking time using the procedures in paragraph (a)(7)(ii) or (a)(7)(iii) of this section.

(ii) To qualify for a decreased coking time for an oven placed on increased coking time in accordance with paragraph (a)(5) or (6) of this section, you must operate the oven on the decreased coking time. After no more than two coking cycles on the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in §63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery ..., you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery ..., the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iii) If the attempt to qualify for decreased coking time was unsuccessful as described in paragraph (a)(7)(ii) of this section, you may again attempt to qualify for decreased coking time for the oven. To do this, you must operate the oven on the decreased coking time. After no more than two coking cycles on the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in §63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery ..., you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery ..., the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iv) You must report to the permitting authority as a deviation the second and any subsequent consecutive unsuccessful attempts on the same oven to qualify for decreased coking time as described in paragraph (a)(7)(iii) of this section.

**§63.7334(a)** For each by-product coke oven battery with vertical flues subject to the work practice standards for fugitive pushing emissions in §63.7291(a), you must demonstrate continuous compliance according to the requirements of paragraphs (a)(1) through (8) of this section:

(1) Observe and record the opacity of fugitive emissions for four consecutive pushes per operating day, except you may make fewer or non-consecutive observations as permitted by §63.7291(a)(3). Maintain records of the pushing schedule for each oven and records indicating the legitimate operational reason for any change in the pushing schedule according to §63.7291(a)(4).

(2) Observe and record the opacity of fugitive emissions from each oven in a battery at least once every 90 days. If an oven cannot be observed during a 90-day period, observe and record the opacity of the first push of that oven following the close of the 90-day period that can be read in accordance with the procedures in paragraphs (a)(1) through (8) of this section.

(3) Make all observations and calculations for opacity observations of fugitive pushing emissions in accordance with Method 9 in appendix A to 40 CFR part 60 using a Method 9 certified observer unless you have an approved alternative procedure under paragraph (a)(7) of this section.

(4) Record pushing opacity observations at 15-second intervals as required in section 2.4 of Method 9 (appendix A to 40 CFR part 60). The requirement in section 2.4 of Method 9 for a minimum of 24 observations does not apply, and the data reduction requirements in section 2.5 of Method 9 do not apply. The requirement in §63.6(h)(5)(ii)(B) for obtaining at least 3 hours of observations (thirty 6-minute averages) to demonstrate initial compliance does not apply.

(5) If fewer than six but at least four 15-second observations can be made, use the average of the total number of observations to calculate average opacity for the push. Missing one or more observations during the push (e.g., as the quench car passes behind a building) does not invalidate the observations before or after the interference for that push. However, a minimum of four 15-second readings must be made for a valid observation.

(6) Begin observations for a push at the first detectable movement of the coke mass. End observations of a push when the quench car enters the quench tower.

...

(iii) You may reposition after the push to observe emissions during travel if necessary.

...

(8) For each oven observed that exceeds an opacity of 30 percent for any short battery ..., you must take corrective action and/or increase the coking time in accordance with §63.7291(a). Maintain records documenting conformance with the requirements in §63.7291(a).

**EU 021, Condition 13, Good Engineering Practice & Minimize Emissions to the Level of Subpart CCCCC**  
(incorporating §63.7300(a) and §63.7300(b)(1)-(5))

**§63.7300(a)** "As required by §63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart."

*This requirement is commonly included in MACT standards and is often referred to as a "general duty clause."*

**EU 021, Condition 14, Subpart CCCCC – Continuous Compliance with the Operation and Maintenance Requirements** (incorporating §63.7335)

*Bluestone is required to have and operate the batteries according to a written operation and maintenance plan at all times.*

**§63.7335(a)** "For each by-product coke oven battery, you must demonstrate continuous compliance with the operation and maintenance requirements in §63.7300(b) by adhering at all times to the plan requirements and recording all information needed to document conformance."

**§63.7300(b)** You must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (b)(1) through (6) of this section.

- (1) Frequency and method of recording underfiring gas parameters.
- (2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.
- (3) Procedures to prevent pushing an oven before it is fully coked.
- (4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.
- (5) Frequency and procedures for inspecting flues, burners, and nozzles.
- (6) Schedule and procedures for the daily washing of baffles.

**§63.7335(b)** "For each coke oven battery with a capture system or control device applied to pushing emissions, you must demonstrate continuous compliance with the operation and maintenance requirements in §63.7300(c) by meeting the requirements of paragraphs (b)(1) through (3) of this section:

- (1) Making monthly inspections of capture systems according to §63.7300(c)(1) and recording all information needed to document conformance with these requirements;
- (2) Performing preventative maintenance for each control device according to §63.7300(c)(2) and recording all information needed to document conformance with these requirements; and

(3) Initiating and completing corrective action for a bag leak detection system alarm according to §63.7300(c)(3) and recording all information needed to document conformance with these requirements. This includes records of the times the bag leak detection system alarm sounds, and for each valid alarm, the time you initiated corrective action, the corrective action(s) taken, and the date on which corrective action is completed. “

**§63.7335(c)** To demonstrate continuous compliance with the operation and maintenance requirements for a baghouse applied to pushing emissions from a coke oven battery in §63.7331(a), you must inspect and maintain each baghouse according to the requirements in §63.7331(a)(1) through (8) and record all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in §63.7331(a)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

**§63.7335(d)** You must maintain a current copy of the operation and maintenance plans required in §63.7300(b) and (c) onsite and available for inspection upon request. You must keep the plans for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

### 3. DOORS, OFFTAKES and CHARGING OPERATIONS

*When 40 CFR 63, Subpart L was promulgated, the facility elected to meet the standards for compliance date extension at §63.304, including an earlier compliance date of November 15, 1993 and a final compliance date for the standards at §63.302 of January 1, 2020. The applicable emission limits under both sections have been identical since January 1, 2010. To help distinguish which emission limits apply, it is important to note that Bluestone is a by-product “furnace” coke plant with “short” batteries. Bluestone uses “self-sealing” doors.*

*Compliance with both the MACT and the local regulations is determined based on inspections according to EPA Method 303 (40 CFR 63, Appendix A) and the calculation procedures of §63.309. Ovens which are not in service are not counted toward the percentage of leaks from an emission point.*

#### a. DOORS

#### Title V Permit 4-07-0355-03

#### EU 009, EU 012 and EU 015, Condition 5, Percent Leaking Doors Restriction (citing Subpart L and 6.9.6)

**Subpart L emission limit:** “3.3 percent leaking coke oven doors for each by-product coke oven battery ..., as determined by the procedures in §63.309(d)(1)” from §§63.302(a)(3)(ii) and 63.304(b)(3)(ii).

**§63.309(d)(1):** “Using the observations obtained from each performance test, ... The 30-run rolling average of the percent leaking coke oven doors, topside port lids, and offtake systems on each coke oven battery, using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303 (or section 3.4.3.2 of Method 303A) in appendix A to this part;”

**§63.309(c)(1):** “The certified observer shall conduct one run each day to observe and record visible emissions from each coke oven door (except for doors covered by an alternative standard under §63.305), topside port lid, and offtake system on each coke oven battery.”

*Compliance with the Subpart L limit on leaking doors is based on a 30-run average of daily observations of the doors on both sides of the battery in which leaks are counted. Ovens which are not in service are not counted toward the daily percentage of leaking doors.*

**6.9.6(a)** There shall be no visible emissions, except non-smoking flame, from any opening on the coke oven doors from more than fifteen percent (15%) of the coke oven doors on any battery at any time.

*This limit is based on a single run-by-observing the doors on both sides of the battery in which leaks are counted. Ovens which are not in service are not counted toward the percentage of leaking doors.*

**6.9.6(b)** If a self-sealing door fails to seal during the coking cycle, it shall be adjusted, repaired or replaced prior to a subsequent charge of that oven.

*Self-explanatory. Bluestone uses "self-sealing" doors.*

#### **b. OFFTAKES**

##### **Title V Permit 4-07-0355-03**

**EU 009, EU 012 and EU 015, Condition 7, Percent Leaking Offtake System Restriction** (citing Subpart L and 6.9.5)

**§63.301** "Offtake system means any individual oven apparatus that is stationary and provides a passage for gases from an oven to a coke oven battery collecting main or to another oven. Offtake system components include the standpipe and standpipe caps, goosenecks, stationary jumper pipes, mini-standpipes, and standpipe and gooseneck connections."

**Subpart L emission limit:** "2.5 percent leaking offtake systems, as determined by the procedures in §63.309(d)(1)" from §§63.302(a)(3)(iv) and 63.304(b)(2)(iii).

**§63.309(d)(1):** "Using the observations obtained from each performance test, ... The 30-run rolling average of the percent leaking coke oven doors, topside port lids, and offtake systems on each coke oven battery, using the equations in sections 4.5.3.2, 5.6.5.2, and 5.6.6.2 of Method 303 (or section 3.4.3.2 of Method 303A) in appendix A to this part;"

**§63.309(c)(1):** "The certified observer shall conduct one run each day to observe and record visible emissions from each coke oven door (except for doors covered by an alternative standard under §63.305), topside port lid, and offtake system on each coke oven battery."

*Compliance with the Subpart L limit on leaking offtakes is based on a 30-run average of daily observations of the offtakes on the battery in which leaks are counted. Ovens which are not in service are not counted toward the daily percentage of leaking offtakes.*

**6.9.5(b)** At no time shall there be leaks in more than ten percent (10%) of the offtake piping and no more than five percent (5%) of the charging hole lids on any one battery.

*These limits are based on a single walk-over of the battery (a "run") in which leaks are counted. Ovens which are not in service are not counted toward the percentage of leaking offtakes.*

#### **c. CHARGING**

##### **Title V Permit 4-07-0355-03**

**EU 009, EU 012 and EU 015, Condition 8, Charging Visible Emissions Time Restriction (citing Subpart L)**

**EU 009, EU 012 and EU 015, Condition 9, Charging Visible Emissions Opacity Restriction (citing 6.9.3)**

**§63.301** "Charge or charging period means, for a by-product coke oven battery, the period of time that commences when coal begins to flow into an oven through a topside port and ends when the last charging port is recapped."

**Subpart L emission limit:** "12 seconds of visible emissions per charge, as determined by the procedures in §63.309(d)(2)" from §§63.302(a)(3)(v) and 63.304(b)(2)(iv).

**§63.309(d)(2):** "Using the observations obtained from each performance test, ... For by-product coke oven battery charging operations, the logarithmic 30-day rolling average of the seconds of visible emissions per charge for each battery, using the equation in section 3.9 of Method 303 in appendix A to this part;"

**§63.309(c)(2):** "The certified observer also shall conduct five runs to observe and record the seconds of visible emissions per charge for five consecutive charges from each coke oven battery."

*Compliance with the Subpart L limit on visible emissions from charging operations is based on a logarithmic 30-run average of daily observations of 5 charges per battery in which leaks are timed using a stopwatch. Batteries 3 and 4 are treated as one battery for the purposes of observing charging emissions.*

**6.9.3 Charging.** There shall be no visible emissions during the charging cycle from the charging holes or the larry car of any battery with an opacity which is greater than twenty percent (20%) except for an average period or periods not to exceed three (3) minutes of any consecutive sixty (60) minutes on batteries with less than seventy (70) ovens nor more than four (4) minutes of any consecutive sixty (60) minutes on batteries with seventy (70) ovens or more.

*This limit on charging emissions addresses hourly emissions. Periods of visible emissions from charging are timed using a stopwatch. The limit for all batteries at Bluestone is 3 minutes in any consecutive 60 minutes. Batteries 3 and 4 are treated as one battery for the purposes of observing charging emissions.*

**d. Subpart L Work Practice Plan Implementation**

**Title V Permit 4-07-0355-03**

**EU 009, EU 012 and EU 015, Condition 12, Work Practice Standards (citing §63.306(a), §63.307 and §63.309(h))**

**EU 009, EU 012 and EU 015, Condition 13, Implementation of Work Practice Plans (citing §63.306(c)(1)(i))**

*Only the requirements at issue are reprinted below.*

**§63.306(a):** "...each owner or operator shall prepare and submit a written emission control work practice plan for each coke oven battery. The plan shall be designed to achieve compliance with visible emission limitations for coke oven doors, topside port lids, offtake systems, and charging operations under this subpart..."

*Requirements for plan content are at §63.306(b). Generally, the plan must include provisions for operator training and for equipment operations and inspections. The most recent version of the plan which has been provided to the Department was revised by Bluestone Coke in September of 2019. This plan addresses both Subpart L and Subpart CCCCC.*

**§63.306(b):** "Plan components. The owner or operator shall organize the work practice plan to indicate clearly which parts of the plan pertain to each emission point subject to visible emission standards under this subpart. Each of the following provisions, at a minimum, shall be addressed in the plan:

**(1)** An initial and refresher training program for all coke plant operating personnel with responsibilities that impact emissions, including contractors, in job requirements related to emission control and the requirements of this subpart, including work practice requirements. Contractors with responsibilities that impact emission control may be trained by the owner or operator or by qualified contractor personnel; however, the owner or operator shall ensure that the contractor training program complies with the requirements of this section. The training program in the plan must include:

**(i)** A list, by job title, of all personnel that are required to be trained and the emission point(s) associated with each job title;

**(ii)** An outline of the subjects to be covered in the initial and refresher training for each group of personnel;

**(iii)** A description of the training method(s) that will be used (e.g., lecture, video tape);

**(iv)** A statement of the duration of initial training and the duration and frequency of refresher training;

**(v)** A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion of the initial and refresher training; and

**(vi)** A description of the procedure to be used to document performance of plan requirements pertaining to daily operation of the coke oven battery and its emission control equipment, including a copy of the form to be used, if applicable, as required under the plan provisions implementing paragraph (b)(7) of this section.

**(2)** Procedures for controlling emissions from coke oven doors on by-product coke oven batteries, including:

**(i)** A program for the inspection, adjustment, repair, and replacement of coke oven doors and jambs, and any other equipment for controlling emissions from coke oven doors, including a defined frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

**(ii)** Procedures for identifying leaks that indicate a failure of the emissions control equipment to function properly, including a clearly defined chain of command for communicating information on leaks and procedures for corrective action;

**(iii)** Procedures for cleaning all sealing surfaces of each door and jamb, including identification of the equipment that will be used and a specified schedule or frequency for the cleaning of sealing surfaces;

**(iv)** For batteries equipped with self-sealing doors, procedures for use of supplemental gasketing and luting materials, if the owner or operator elects to use such procedures as part of the program to prevent exceedances;

...

**(vi) Procedures for maintaining an adequate inventory of the number of spare coke oven doors and jambs located onsite; and**

**(vii) Procedures for monitoring and controlling collecting main back pressure, including corrective action if pressure control problems occur.**

**(3) Procedures for controlling emissions from charging operations on by-product coke oven batteries, including:**

**(i) Procedures for equipment inspection, including the frequency of inspections, and replacement or repair of equipment for controlling emissions from charging, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;**

**(ii) Procedures for ensuring that the larry car hoppers are filled properly with coal;**

**(iii) Procedures for the alignment of the larry car over the oven to be charged;**

**(iv) Procedures for filling the oven (e.g., procedures for staged or sequential charging);**

**(v) Procedures for ensuring that the coal is leveled properly in the oven; and**

**(vi) Procedures and schedules for inspection and cleaning of offtake systems (including standpipes, standpipe caps, goosenecks, dampers, and mains), oven roofs, charging holes, topside port lids, the steam supply system, and liquor sprays.**

**(4) Procedures for controlling emissions from topside port lids on by-product coke oven batteries, including:**

**(i) Procedures for equipment inspection and replacement or repair of topside port lids and port lid mating and sealing surfaces, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances; and**

**(ii) Procedures for sealing topside port lids after charging, for identifying topside port lids that leak, and procedures for resealing.**

**(5) Procedures for controlling emissions from offtake system(s) on by-product coke oven batteries, including:**

**(i) Procedures for equipment inspection and replacement or repair of offtake system components, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;**

**(ii) Procedures for identifying offtake system components that leak and procedures for sealing leaks that are detected; and**

**(iii) Procedures for dampering off ovens prior to a push.**

**(6) ...**

**(7) Procedures for maintaining, for each emission point subject to visible emission limitations under this subpart, a daily record of the performance of plan requirements pertaining to the daily operation of the coke oven battery and its emission control equipment, including:**

**(i) Procedures for recording the performance of such plan requirements; and**

**(ii) Procedures for certifying the accuracy of such records by the owner or operator.**

**(8) Any additional work practices or requirements specified by the Administrator according to paragraph (d) of this section.**

*The Department has reviewed the Work Practice and has found that it includes the required elements.*

**§63.306(c):** "Implementation of work practice plans. On and after November 15, 1993, the owner or operator of a coke oven battery shall implement the provisions of the coke oven emission control work practice plan according to the following requirements:

**(1)** The owner or operator of a coke oven battery subject to visible emission limitations under this subpart on and after November 15, 1993, shall:

**(i)** Implement the provisions of the work practice plan pertaining to a particular emission point following the second independent exceedance of the visible emission limitation for the emission point in any consecutive 6-month period, by no later than 3 days after receipt of written notification of the second such exceedance from the certified observer. For the purpose of this paragraph (c)(1)(i), the second exceedance is "independent" if either of the following criteria is met:

**(A)** The second exceedance occurs 30 days or more after the first exceedance;

**(B)** In the case of coke oven doors, topside port lids, and offtake systems, the 29-run average, calculated by excluding the highest value in the 30-day period, exceeds the value of the applicable emission limitation; or

**(C)** In the case of charging emissions, the 29-day logarithmic average, calculated in accordance with Method 303 in appendix A to this part by excluding the valid daily set of observations in the 30-day period that had the highest arithmetic average, exceeds the value of the applicable emission limitation.

**(ii)** Continue to implement such plan provisions until the visible emission limitation for the emission point is achieved for 90 consecutive days if work practice requirements are implemented pursuant to paragraph (c)(1)(i) of this section. After the visible emission limitation for a particular emission point is achieved for 90 consecutive days, any exceedances prior to the beginning of the 90 days are not included in making a determination under paragraph (c)(1)(i) of this section.

*Work practice plan implementation is required to address frequent exceedances of Subpart L limits over any 6 month period. The plain English explanation of "independent" exceedances: First, 2 or more exceedances of the 30-day (regular or logarithmic) average occurring 30 days or more apart (within a 6 month period) are "independent" and implementation has been triggered. Second, implementation may also be triggered as early as the second exceedance if the exclusion of the highest single day inspection results within the 30-day period produces a 29-day (regular or logarithmic) average that also exceeds the applicable emission limit. This second circumstance is also termed "independent."*

**§63.306(d)(1):** “The reviewing authority may request the owner or operator to review and revise as needed the work practice emission control plan for a particular emission point if there are 2 exceedances of the applicable visible emission limitation in the 6-month period that starts 30 days after the owner or operator is required to implement work practices under paragraph (c) of this section. In the case of a coke oven battery subject to visual emission limitations under this subpart, the second exceedance must be independent of the criteria in paragraph (c)(1)(i) of this section.”

*The Department could require revision of the work practice plan for the following points according to this provision: Charging emissions from Batteries 3 and 4, charging emissions from Battery 5 (on June 22, 2020 or later), offtakes on Battery 3, offtakes on Battery 5 (on June 29, 2020 or later), and doors on Batteries 3, 4 and/or 5.*

#### **4. REQUIREMENTS FOR SPARE DOORS AND LIDS**

*This section discusses the work practice plan requirements for maintaining spare doors and lids in order to properly maintain and repair ovens.*

##### **Title V Permit 4-07-0355-03**

##### **EU 009, EU 012 and EU 015, Condition 16, Oven Maintenance (citing 6.9.7)**

**6.9.7(a)** All ovens shall be maintained in good condition to promote complete coking of coal.

**6.9.7(b)** All coke oven cracks are to be sealed as soon as practicable after they are detected.

**6.9.7(c)** As directed by the Health Officer, reasonable records of the maintenance of oven doors, oven burners, and oven interiors are to be made and retained for a reasonable time.

*Self-explanatory. The Department will point out that taking an oven out of service until repairs are made is not a violation of this provision.*

##### **EU 009, EU 012 and EU 015, Condition 17, Coke Oven Standards (incorporating 6.9.6)**

**6.9.6(d):** “Every person operating coke ovens shall have a facility to maintain and repair coke oven doors, and shall maintain an inventory of one (1) coke oven door per twelve (12) ovens operated.”

*Bluestone does have a door repair facility.*

##### **EU 009, EU 012 and EU 015, Condition 12, Work Practice Standards (citing §63.306(a), §63.307 and §63.309(h))**

*Requirements for plan content are at §63.306, which was presented above. Only the plan components that are at issue will be excerpted below:*

**§63.306(b)(2):** “Procedures for controlling emissions from coke oven doors on by-product coke oven batteries, including: ... (vi) Procedures for maintaining an adequate inventory of the number of spare coke oven doors and jambs located onsite; and ...”

*These procedures are included in the plan described above on pages 11 – 12. The doors on the “pusher side” of the battery are different from the doors on the “coke side” of the battery because a “chuck door” is needed to allow the leveling of coal that has been charged into the oven.*

**§63.311(f)(4):** “If the owner or operator is required under §63.306(c) to implement the provisions of a work practice plan for a particular emission point, the following records regarding the implementation of plan requirements for that emission point during the implementation period; ... (iv) If the plan

provisions for coke oven doors must be implemented, records of the inventory of doors and jambs as required under §63.306(b)(2)(vi); ...”

*Bluestone was required to examine and record the quantity of spare doors and jambs within 10 days of implementation of the work practice plan for doors.*

## **5. REPORTING REQUIREMENTS**

### **Title V Permit 4-07-0355-03**

*The actual text of the permit conditions is presented below.*

#### **General Condition 6, Maintenance of Equipment: Reporting** (citing 1.12.1, 18.2.4 and 18.2.8(a)):

Maintenance: Reporting. In the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least 24 hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:

- A. Identification of the specific facility to be taken out of service as well as its location and permit number;
- B. The expected length of time that the air pollution control equipment will be out of service;
- C. The nature and quantity of emissions of air contaminants likely to occur during the shutdown period;
- D. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period; and
- E. The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.

#### **General Condition 7, Malfunction: Reporting** (citing 1.12.2, 18.2.4 and 18.2.8(a)):

In the event that any emission source, air pollution control equipment, or related facility fails or breaks down in such a manner as to cause the emission of air contaminants in violation of these rules and regulations, the person responsible for such source, equipment, or facility shall notify the Health Officer within 24 hours of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Health Officer shall be notified when the condition causing the failure or breakdown has been corrected and such source, equipment, or facility is again in operation.

#### **General Condition 17, Deviations** (citing 18.5.3(c)(2) and 40 CFR 63):

Deviations from permit requirements shall be reported within 2 working days of such deviations, including those attributable to upset conditions, the probable cause of said deviations, and any corrective actions or preventive measures that were taken.

*Reporting requirements for Subpart CCCCC and Subpart L are included below for completeness.*

#### **General Condition 59, Deviations-Demonstrating Continuous Compliance (NESHAP Requirements)** (citing 40 CFR 63, Subpart CCCCC, 63.7336 and 63.7341)

**EU 021, Condition 9, Subpart CCCCC – Fugitive Pushing Emissions: Deviations – Reporting Requirements**  
(incorporating §63.7291(a)(6)(iii) and §63.7291(a)(7)(iv))

**EU 021, Condition 6, Subpart CCCCC – Reporting Requirements** (incorporating §63.7341)

*Pertinently, Bluestone is required to report each instance in which the pushing emissions are not captured and controlled as required by Subpart CCCCC. The definition of deviation and the reporting requirements that apply for the on-going failure to use the capture and collection system are below for reference. These are in addition to Title V reporting requirements.*

**§63.7352 Definitions ...** Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including operating limits) or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission limitation means any emission limit, opacity limit, or operating limit.

**§63.7336(a):** “Deviations. You must report each instance in which you did not meet each emission limitation in this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. You must also report each instance in which you did not meet each work practice standard or operation and maintenance requirement in this subpart that applies to you. These instances are deviations from the emission limitations (including operating limits), work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements in §63.7341.”

**§63.7341(c)(5):** “... If there were no deviations from the continuous compliance requirements in §§63.7333 through 63.7335 that apply to you (for all affected sources other than battery stacks), a statement that there were no deviations from the emission limitations, work practice standards, or operation and maintenance requirements during the reporting period.”

**§63.7341(c)(7):** “For each deviation from an emission limitation in this subpart (including quench water limits) and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a continuous monitoring system (including a COMS, CEMS, or CPMS) to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

- (i) The total operating time of each affected source during the reporting period.
- (ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.”

**§63.7341(c)(4):** "If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i)"

**§63.7341(e):** "Part 70 monitoring report. If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or work practice standard in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. **However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements to your permitting authority.**" *(emphasis added)*

**EU 009, 012, 015, Condition 2, Subpart L of 40 CFR 63** (incorporating Subpart L)

**§63.306(d)(3):** "If the certified observer calculates that a second exceedance (or, if applicable, a second independent exceedance) has occurred, the certified observer shall notify the owner or operator. No later than 10 days after receipt of such a notification, the owner or operator shall notify the reviewing authority of any finding of whether work practices are related to the cause or the solution of the problem. The notification is subject to review by the reviewing authority according to the provisions in paragraph (d)(6) of this section."

**§63.306(d)(6):** "... The reviewing authority may also disapprove the finding that may be submitted pursuant to paragraph (d)(3) of this section if the reviewing authority determines that a revised plan is needed to prevent exceedances of the applicable visible emission limitations."

*Bluestone was required to assess whether work practices are related to the cause or solution to the problem(s) causing plan implementation to be triggered within 10 days of being notified that implementation has been triggered. The Department is the reviewing authority because it has accepted delegation of 40 CFR 63, Subpart L from EPA in Chapter 14 of the Rules and Regulations.*

**EU 009, 012, 015, Condition 20, Semiannual Compliance Certification** (incorporating §63.311)

**§63.311(d)(3):** "Semiannual compliance certification. The owner or operator of a coke oven battery shall include the following information in the semiannual compliance certification:... (3) Certification, signed by the owner or operator, that work were implemented if applicable under §63.306."

*The required notification was included in the second semi-annual certification report for 2019 for doors on Battery 4 and charging on Batteries 3 and 4. Additional notifications for emission points which have triggered implementation during January to June of 2020 must be included in the first semi-annual certification report for 2020 (due July 31, 2020).*

### ATTACHMENT 3

#### PERTINENT DATES (5 Tables)

**Table 1 – SUBPART CCCCC Pushing Opacity Limitations – Instances in which MACT corrective actions were triggered, July 1, 2019 to present (ovens currently in corrective actions are highlighted)**

Oven #	Date of "Trigger" Reading in Excess of 30%	Date Corrective Action Completed	Any Deviations (rereads in excess of 30%)
123	January 16, 2020	January 27, 2020	None
134	September 5, 2019	September 24, 2019	None
139	January 27, 2020	February 8, 2020	None
142	March 5, 2020	March 25, 2020	None
148	March 7, 2020	Removed from service	None
150	September 12, 2019	September 29, 2019	None
150	February 29, 2020	Removed from service	None
151	August 28, 2019	September 24, 2019	None
157	September 30, 2019	October 25, 2019	None
157	November 28, 2019	January 1, 2020	None
161	December 20, 2019	January 29, 2020	December 28, 2019, January 18, 2020
162	August 25, 2019	September 5, 2019	None
162	October 19, 2019	Removed from service	None
163	August 24, 2019	September 3, 2019	None
172	January 26, 2020	February 17, 2020	None
172	March 15, 2020	April 2, 2020	None
172	June 11, 2020	6/27/2020	None
172	July 5, 2020	N/A	N/A
174	January 13, 2020	January 21, 2020	None
174	February 7, 2020	Removed from service	None
179	December 17, 2019	Removed from service	None
184	January 25, 2020	February 14, 2020	None
194	March 5, 2020	March 19, 2020	None
194	March 26, 2020	April 5, 2020	None
200	September 16, 2019	October 10, 2019	None
200	March 13, 2020	February 28, 2020	None
200	May 8, 2020	May 23, 2020	None
201	September 9, 2019	October 3, 2019	None

Oven #	Date of "Trigger" Reading in Excess of 30%	Date Corrective Action Completed	Any Deviations (rereads in excess of 30%)
201	July 4, 2020	July 6, 2020	None
202	December 28, 2019	January 10, 2020	None
202	May 20, 2020	May 22, 2020	None
203	September 11, 2019	October 11, 2019	September 26, 2019
203	December 27, 2019	January 15, 2020	None
203	January 26, 2020	February 9, 2020	None
203	May 13, 2020	June 19, 2020	May 15, 2020, May 30, 2020
208	February 7, 2020	February 19, 2020	None
209	September 18, 2019	October 8, 2019	None
209	February 10, 2020	March 15, 2020	March 1, 2020
209	May 15, 2020	May 18, 2020	None
215	May 1, 2020	May 21, 2020	None
216	March 28, 2020	April 10, 2020	None
216	May 13, 2020	May 16, 2020	None
217	March 26, 2020	April 6, 2020	None
217	May 7, 2020	May 26, 2020	None
217	June 16, 2020	N/A	N/A
218	September 19, 2019	October 14, 2019	None
226	May 14, 2020	N/A	May 29, 2020, June 20, 2020
229	February 23, 2020	March 15, 2020	None
229	May 15, 2020	June 1, 2020	None
229	June 3, 2020,	June 24, 2020	June 20, 2020
229	June 26, 2020	N/A	N/A
230	September 26, 2019	October 7, 2019	None
230	May 27, 2020	N/A	June 14, 2020
232	March 2, 2020	March 16, 2020	None
232	May 20, 2020	May 23, 2020	None
233	September 16, 2019	October 2, 2019	None
233	January 26, 2020	February 14, 2020	None
233	March 28, 2020	April 8, 2020	None
233	April 27, 2020	May 10, 2020	None
233	June 21, 2020	N/A	N/A

Oven #	Date of "Trigger" Reading in Excess of 30%	Date Corrective Action Completed	Any Deviations (rereads in excess of 30%)
234	September 25, 2019	October 15, 2019	None
234	February 19, 2020	March 24, 2020	March 12, 2020
235	February 1, 2020	February 16, 2020	None
235	March 2, 2020	April 1, 2020	None
235	April 21, 2020	June 5, 2020	May 20, 2020
235	June 29, 2020	N/A	July 3, 2020
236	December 14, 2019	January 4, 2020	None

**Table 2 – Local Regulations – Instances where 2 or more ovens with peak emissions greater than 40% were pushed within a 60-minute period, from July 1, 2019 to present (format is DATE (Oven # @ Military Time))**

Count	Battery 3	Battery 4	Battery 5
1	9/30/2019 9135@10:45, 145@10:56)	9/24/2019 (167@11:24, 177@11:36))	8/17/2019 (184@11:30, 194@11:49)
2	12/3/2019 (131@9:36, 141@10:18)	10/4/2019 (163@14:45, 180@15:14)	9/7/2019 (203@9:57, 233@10:06)
3	1/27/2020 (135@11:36, 139@11:48)		9/11/2019 (203@10:35, 233@10:47)
4	2/1/2020 (140@7:20, 137@8:20)		12/28/2019 (235@10:48, 202@10:59)
5	2/12/2020 (144@8:13, 121@9:13)		1/5/2020 (235@6:45, 202@6:55)
6	3/12/2020 (121@12:36, 131@13:02)		1/6/2020 (205@9:48, 195@10:23)
7			1/7/2020 (204@14:14, 215@14:25.195@14:38)
8			1/26/2020 (203@9:51, 233@10:05, 200@10:18)
9			1/31/2020 (229@7:53, 216@8:13)
10			2/1/2020 (225@7:38, 235@7:58)
11			2/2/2020 (194@12:35, 204@12:45)
12			2/10/2020 (199@8:55, 209@9:24)
13			2/11/2020 (215@9:27, 225@10:27)
14			2/18/2020 (208@8:07, 195@8:54)
15			2/23/2020 (226@12:22, 236@12:37))
16			3/2/2020 (235@8:54, 232@9:30)

Count	Battery 3	Battery 4	Battery 5
17			3/4/2020 (194@6:06, 204@6:17)
18			3/10/2020 (208@7:46, 218@8:02, 195@8:36)
19			3/12/2020 (184@8:21, 217@8:34)
20			3/13/2020 (233@8:02, 200@8:28)
21			3/14/2020 (216@8:01, 226@8:17)
22			3/21/2020 (233@7:37, 200@8:42)
23			3/28/2020 (226@7:57, 203@8:26, 233@8:45)
24			4/24/2020 (194@7:46, 217@8:33)
25			5/1/2020 (215@7:55, 225@8:46)
26			5/13/2020 (226@9:46, 203@9:59)
27			5/18/2020 (202@6:09, 232@6:30)
28			5/20/2020 (202@10:02, 235@10:19, 232@10:45)
29			5/21/2020 (215@6:10, 225@6:29)
30			6/5/2020 (235@5:23, 202@6:07, 232@6:20)
31			6/7/2020 (205@6:16, 215@6:28)
32			6/19/2020 (203@6:09, 233@6:20)
33			6/20/2020 (216@5:37, 226@5:51, 229@6:01)
34			6/21/2020 (203@9:22, 233@9:35)
35			6/29/2020 (215@5:56, 225@6:02, 235@6:22)

**TABLE 3 – Exceedances of Subpart L and Local Limitations on Leaking Doors**

Regulation	Battery 3	Battery 4	Battery 5
§63.304(b) Doors >3.3% (30-day ave)	1/3-4/2020	1/20-22/2019	3/17/2020-3/26/2020
	1/7/2020	2/8-12/2019	3/28/2020
	1/17-21/2020	2/22/2019	4/23/2020-present
	1/23-24/2020	2/24 - 26/2019	
	1/27/2020	2/28/2019	
	2/8/2020 - 2/15/2020	11/17 - 21/2019	
	2/19/2020-present	12/22-27/2019	
		12/30/2019	
		1/1/2020	
		1/3/2020	
		1/9-10/2020	
		1/13/2020	
		4/17/2020	
		4/25/2020-present	
§63.306(c)(1)(i)(A) Doors >3.3% (2nd exceedance more than 30 days but less than 6 months from first)		12/22/2019 *Work Practice Plan triggered	
§63.306(c)(1)(i)(B) Doors >3.3% (29/30-day ave excluding highest)	1/18/2020 *Work Practice Plan triggered	2/12/2019 *Work Practice Plan triggered	3/17/2020 *Work Practice Plan triggered
§63.306(d) revision may be required if 2 "independent" exceedances occur more than 30 days after implementation is triggered	allowed February 22, 2020 or later	allowed April 25, 2020 or later	allowed April 24, 2020 or later
6.9.6(a) Doors >15%	4/19/2020		
	4/28/2020		
	5/14/2020		
	6/7/2020		
	6/9/2020		
	6/10/2020		
	6/13/2020		
	6/23/2020		
	6/24/2020		
	7/9/2020		

**TABLE 4 – Exceedances of Subpart L and Local Limitations on Leaking Offtakes**

Regulation	Battery 3	Battery 4	Battery 5
§63.304(b) Offtakes >2.5% (30-day ave)	4/19/2020 - present	1/7/2020 - 1/29/2019	5/21/2020-5/29/2020
		2/1/2020 - 2/5/2020	
		6/20/2020 - present	
§63.306(c)(1)(i)(A) Offtakes >2.5% (2nd exceedance more than 30 days but less than 6 months from first)	4/20/2020 *Work Practice Plan triggered		5/29/2020 *Work Practice Plan Triggered
§63.306(c)(1)(i)(B) Offtakes >2.5% (29/30-day ave excluding highest)			
§63.306(d) revision may be required if 2 "independent" exceedances occur more than 30 days after implementation is triggered	allowed May 25, 2020 or later	the 30 day mark is July 16, 2020	exceedances have not been "independent"
6.9.5(b) Offtakes >10%	2/8/2020	3/9/2019	6/11/2020
	3/28/2020	11/17/2019	6/12/2020
	4/1/2020	12/26/2019	
	4/9/2020	12/30/2019	
	4/17/2020-	12/31/2019	
	4/18/2020	1/7/2020	
	4/19/2020	1/26/2020	
	4/20/2020	3/9/2020	
	4/22/2020	3/19/2020	
	5/2/2020	6/1/2020	
	5/7/2020	6/14/2020	
	5/8/2020	6/16/2020	
	5/11/2020	6/17/2020	
	5/12/2020	6/20/2020	
	5/13/2020		
	5/17/2020		
	5/23/2020		
	5/25/2020		
	5/28/2020		
	5/30/2020		
	5/31/2020		
	6/5/2020		
	6/7/2020		
	6/11/2020		

Regulation	Battery 3	Battery 4	Battery 5
	6/12/2020		
	6/13/2020		
	6/14/2020		
	6/17/2020		
	6/18/2020		
	6/19/2020		
	6/20/2020		
	6/21/2020		
	6/22/2020		
	6/24/2020		
	6/25/2020		
	6/26/2020		
	7/2/2020		
	7/5/2020		
	7/7/2020		
	7/9/2020		
	7/10/2020		
	7/11/2020		

**TABLE 5 – Exceedances of Subpart L Limitations on Visible Charging Emissions**

	<b>Batteries 3 &amp; 4</b>	<b>Battery 5</b>
§63.304(b) Charging >12 sec (30-day log ave)	9/22/2019	1/3/2020
	11/13/2019	1/9/2020
	11/15-28/2019	5/22/2020-5/31/2020
	12/28/2019-1/15/2020	6/4/2020-PRESENT
	2/12/2020-3/2/2020	
	3/4/2020	
	3/6/2020-3/10/2020	
	3/15/2020-4/22/2020	
	5/28/2020-present	
§63.306(c)(1)(i)(A) Charging >12 sec (2nd exceedance more than 30 days but less than 6 months from first)	11/13/2019 *Work Practice Plan triggered	5/22/2020 *Work Practice Plan triggered
§63.306(c)(1)(i)(C) Charging >12 sec (29/30-day log ave excluding highest)		
§63.306(d) revision may be required if 2 exceedances occur more than 30 days after implementation is triggered	allowed December 29, 2019 or later	allowed May 23, 2020 or later